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O. C. WELBOURN, A. M., M. D., Editor
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SUMMARY OF REPORTS
FROM ONE THOUSAND PHYSICIANS

Remedies named as most useful in INFLUENZA		Remedies named as most useful in PNEUMONIA	
Aconite	788	Bryonia	723
Gelsemium	772	Aconite	617
Bryonia	707	Veratrum	576
Macrotys	384	Lobelia	468
Veratrum	353	Ipecac	411
Eupatorium	328	Asclepias	366
Lobelia	324	Gelsemium	293
Asclepias	268	Belladonna	169
Ipecac	236	Sanguinaria	134

Many physicians found it impossible to name **any** remedy as of "most importance," stating, very truly, that **each** is "most important" when its use is indicated. Others named two or more as most serviceable, giving usually the conditions under which each was used. **For example,** "Gelsemium is most frequently indicated, but where **sepsis** is marked, Echafolta or Echinacea becomes most important." A typical answer, often made, is as follows: "In nearly every case I find indications for **three** remedies—Gelsemium, Macrotys and Eupatorium." Again, "Aconite for fever, Eupatorium for bone-ache, and Macrotys for muscular soreness."

EXTERNAL APPLICATIONS

Libradol	618	Camphorated Oil	62
Compound Emetic Powder	185	Onion Poultice	38
Turpentine Applications	110	Iodine Applications	14
Antiphlogistine	96	Scattering	120
Mustard Applications	72		

Under "Scattering," are included many private prescriptions, as well as such applications as "mush jacket," "flaxseed poultice," "quinine and lard," and one each of the following: "capsicum, mustard and tar," "tobacco and wheat flour," "snuff and black pepper." "Dry cupping" finds one advocate.

It is often stated: "When I cannot get Libradol I use the best attainable substitute," hence many of the above may be considered as emergency applications.

Respectfully,

LLOYD BROTHERS.

Cincinnati, Ohio, March, 1919.

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For the purpose of adding strength to tissues reduced through a long illness, such as influenza, pneumonia or typhoid fever, Hagee's Cord. Ext. Ol. Morrhuae Comp. is of the highest value. The usefulness of Cord. Ext. Ol. Morrhuae Comp. (Hagee) lies in its definite power to stimulate the appetite, increase richness of the blood-stream, add increased resistance to the titssues, and in its palatability, as a result of which it may be given for long periods without causing gastric distress or becoming intolerable to the patient.

The California Eclectic Medical Journal

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:: Original Contributions ::

THE THERAPEUTICS OF LIGHT

John M. Cleaver, M. D., Los Angeles

(Read before the Los Angeles Electic Medical Society)

All methods of treatment consist in the application to the body of some form of energy.

Life is a manifestation of that combination of the five elemental energies which we call "Vitality," or "Vital Energy."

Vital Energy manifests itself both in health and in disease. Disease is but an attempt on the part of the organism to get back to a state of health. Energy is expended in disease conditions as well as in health. In fact, more real energy is needed to get back to a state of healthful activity than is necessary when health is once more regained.

The object of all treatment must be two-fold. First, it must supply raw potential energy which the body may convert into Vital Energy. Second, it must so free the path that the Vital Energy may act in a beneficent manner in bringing back health and healthful activities.

Of the five forms of energy used in the treatment of disease, Chemical Energy is the most common. Next would come Mechanical Motion, and last of all, Light Energy.

It is a law of Nature that each form of energy is readily converted into each other form. Thus Chemical Energy is converted into Mechanical Motion by the processes incident to digestion, assimilation and metabolism. Other energies may also be thus converted.

While Light or Radient Energy is the last on the list of common usage, it is not of necessity the least valuable.

Light is absolutely essential to most forms of highly organized life. Its action is both direct and indirect. Direct, in that it is doubtless in many instances changed to other more

subtle forms of energy; indirect, in that it has a catalytic effect in speeding up chemical reactions.

In applying Radient Energy to the human body we make use of its indirect action to a greater extent than its direct action. While a certain percentage of Light Energy is doubtless changed in the tissues to Vital Energy, our methods of measuring this change are so inadequate as to render the exact proportion subject to conjecture.

The catalytic effects of Light are immediately apparent.

The rays at the Violet and Ultra-Violet end of the spectrum are directly chemical in action. These rays do not penetrate far beneath the superficial layers of the skin and are capable of causing Erythema and subsequent pigmentation. They are very easily deflected and absorbed and do not to any appreciable extent pass through ordinary glass. While they are generated in the incandescent lamp, they are stopped by the glass bulb, and for this reason it is impossible to cause a true Solar Erythema or Sunburn with these lamps.

The Sunlight is rich in Ultra-Violet rays. The dust in the atmosphere absorbs most of them, however, and one must as a rule climb to high altitudes to get their full effect.

The rays at the other end of the spectrum are more penetrating. In fact they will pass entirely through the human body and will fog a sensitized photographic plate in much the same manner as the X Ray.

There are four commonly used methods of applying Light Energy in treatment. The first method is by direct exposure to the Sun's rays. Next in frequency comes the incandescent lamp, ranging in size from fifty to three thousand candlepower. Third is the arc-light, and last is the Mercury Vapor Quartz Lamp.

Every physician uses sunlight in treating disease. Unfortunately only a small portion of the body is ordinarily exposed to the action of the Sun, and while Solariums are used in some parts of the world, they have so many disadvantages as to render them impractical to the ordinary practitioner.

The Mercury Vapor Quartz Lamp generates an immense amount of Ultra-Violet rays. Quartz does not absorb these rays and this is the reason for its use in these lamps. The Ultra-Violet ray being decidedly germicidal in action, these lamps, together to a lesser extent with the Arc-Lamps, are usually used in skin diseases, where they perform a service which cannot be approximated by other agencies.

The Incandescent Therapeutic Lamp, however, is the one in most general use. In the first place it is not as ex-

pensive as the Quartz and Arc apparatus. In the second place it is not so dangerous to use; for it must be remembered that any agency which delivers the Ultra-Violet rays is capable of causing extensive superficial burns. Lastly, its field of usefulness is infinitely wider than either of the other forms of apparatus.

Incandescent Therapeutic Lamps may be purchased at from ten to one hundred and twenty-five dollars and can be used with the greatest value in practically all chronic cases as well as in many acute conditions.

The lamp used by the writer is of three thousand candle-power, and sells for ninety dollars.

The light rays emanating from these lamps penetrate deep into the tissues where they are largely converted into heat energy. The temperature of the deep structures under the influence of these lamps is raised several degrees. This speeds up metabolism and causes a marked increase in the circulation of blood in the part. Passive congestions are dispersed, pain is relieved, and a general sense of well-being is experienced by the patient.

The effect of light energy upon the blood is undisputed. During the course of a treatment all the blood in the body passes beneath the influence of these rays. Blood examinations show an increase of hemaglobin and a distinct normalizing in the number and shape of the blood corpuscles. Oxidation is augmented. More carbondioxide is excreted. All the functions of the body are favorably influenced.

The technique in the use of these lamps has greatly improved in the last few years. It has been found of the utmost importance to keep the skin as cool as possible during the raying of the tissues. Many operators have made the mistake of allowing the skin to become too hot. While under ordinary circumstances it is impossible for the underlying tissues to accumulate too much heat, the skin may easily become overheated. This results either in a general and profuse perspiration, which is not always desirable, or in a feeling of exhaustion, which discounts the effect of the treatment.

The result desired is usually not upon the skin, but upon the interior of the body. Light rays penetrate and do their work just as well through a cool skin as through a hot skin. Cold to the skin is decidedly stimulating, while heat applied to the interior of the body furnishes us with one of the most tonic treatments at our disposal. Cold applied to the skin has always before been more or less dangerous because of the danger of cooling the blood mass and the deeper tissues. This always resulted in congestions and local muscular contractions.

By cooling the skin during the heating of the deep tissues we have an ideal combination which leaves no bad after-effect.

The great desideratum is interior heat and exterior cold.

The writer often uses cold wet packs of momentary duration in conjunction with the heat rays. A towel is wet with cool water and held for a few moments in front of an electric fan, which chills it to the temperature of ice water. This is quickly laid on the part under the rays and the hands are rubbed over the cloth until the temperature of the pack has been changed to body heat. This usually takes about thirty seconds. The pack is then removed and the same procedure may be repeated several times if desired. As a final application, however, the skin should be rubbed and massaged with some oleaginous application. This should be done immediately upon the removal of the cold pack. If oils are not desired, "Epsom Oil" may be used. Epsom Oil is composed of one part Glycerine to two parts saturated solution of Epsom Salts. This has a hydroscopic action and will sometimes "pull" a surprising amount of material from the pores of the skin.

One thing must be remembered in using any form of energy directly upon or over an area of infectious inflammation. This is that there is no better way of vaccinating the patient with his own antigen than by increasing the circulation through an area in which is operating pathogenic organisms.

In using light over such a condition the dose should be carefully regulated, erring on the side of moderation rather than overdoing it. A characteristic negative phase is by no means uncommon following the injudicious application of therapeutic light. This indicates that the part under the rays harbored a nest of infection, the toxic antigens of which were brought into contact with the blood in excessive amount.

Used with judgment there is no better way of exhibiting bacterin therapy than to increase the circulation through an area of acute inflammation. On old, sub-acute chronic lesions the light may be used for longer periods and with the most gratifying results. The reaction of the patient following the treatment is the only sure indication for future dosage. If the patient feels tired and exhausted, or has chilly sensations and a headache, that patient has been overtreated, no matter whether he has been under the light for twenty minutes or for two minutes. Shorten the dosage to the point of toleration and the patient will feel an immediate sense of well-being. A gentle sense of relaxation and languor need not be

mistaken for a sign of overdosing, but merely that a highly strung patient has been thoroughly relaxed.

The average treatment should not last over twenty minutes at the longest. The patient should leave the office with a sense of life and vigor much the same as after a brisk walk through the snow.

The Therapeutic Lamp, properly used, is absolutely invaluable to the physician who believes in using ALL of Nature's remedial agencies in the treatment of disease.

CYCLIC VOMITING

K. P. Baber, M. D., Los Angeles

(Read Before the California Eclectic Medical Association)

Cyclic vomiting, known also as recurrent or periodic vomiting, is a condition met with very frequently in the practice of pediatrics.

It is characterized by severe vomiting and retching, followed by prostration, but nausea does not always follow or precede these attacks. There is usually little or no fever, although occasionally a case will run a temperature as high as 101 or 102°.

The exact etiology of this disease is not known, but is doubtless due to an increased acidity of the body fluids from some disturbance of elimination and absorption.

It has been my experience that these cases come on most frequently, at least here in California, during the winter and spring months, when the citrus fruits are cheap and plentiful.

The basis of this disturbance would then seem to be an error in metabolism rather than an error of digestion and a condition of acidosis exists. The urine is always highly acid, and the breath has a sweetish or acetone odor.

Cyclic vomiting rarely occurs in infancy, but is most frequently seen in children between the ages of five and ten years.

The onset is usually sudden, and many times without any dietary indiscretions. This may come on at night, and if so, the supper will be vomited undigested, or it may come on shortly after he arises in the morning, and will usually complain of a dull, heavy feeling in the stomach, possibly a little nausea, or perhaps pain in the abdomen. This is soon followed by vomiting, and is repeated at intervals, varying from 15 minutes to an hour or so. The vomitus, after the first spell, usually contains principally mucus, perhaps it is bile stained and a few streaks of blood.

As a result of the continued vomiting and retching, prostration develops early, the pulse is accelerated and the child drops back after each attack, the face is pallid, the eyes sunken, abdomen retracted, and has every appearance of being very ill.

After the child has had a little rest and somewhat recovered from the attack, he will complain of being thirsty, hungry, and may be a burning sensation in the stomach. If water is given, it is almost immediately expelled from the stomach and another attach of vomiting and retching is on.

The diagnosis must be made between meningitis and organic lesion of the kidney. The failure of brain symptoms to appear eliminates meningitis. An examination of the urine should be made in order to detect any lesion of the kidney.

If we find the presence of acetone in the urine then a diagnosis of cyclic vomiting should be made.

The prognosis of this disease is good, although a few cases have been reported with fatal termination.

Treatment—Most authors claim that active treatment is of no service during an attack, but it has been my experience that this is not true. I always start my treatment immediately, which consists of the following:

The bowels are usually constipated and a good high S. S. enema brings good results. The lower bowel is thoroughly flushed and half an hour later a Murphy drip sodium bicarb. enema is given, or if this is not convenient a half pint or pint of solution can be slowly injected into the lower bowel and should be retained as long as possible. This alkalinizes the body fluids, overcoming the acid condition.

A four oz. solution containing Ipecac drops 3, and Aconite drops 5, Water q.s. to oz. 4, is left at the house with directions to give one teaspoonful every half hour. No liquid other than this should be given per mouth for the next eight or ten hours, after which the child can begin taking a little broth, milk or thin gruel.

If the retching is very severe and the prostration extreme and is not controlled by the above treatment, then small doses of Codeine or Morphine may be given.

After the vomiting has been controlled and the child is able to handle a little food, I always order a cathartic, and Castor Oil usually heads the list. The diet thereafter should be a mixed one, a very moderate amount of meat, sparingly of cereals, otherwise the diet is not restricted.

PERTUSSIS (WHOOPING-COUGH)

A. F. Stephens, M. D., St. Louis, Mo.

Whooping-cough is a communicable disease, infectious in nature, and characterized by periodic, spasmodic cough. A paroxysm consists of a prolonged expiration accompanied by a succession of short, sharp coughs, which are followed by a correspondingly long inspiration which terminates in what is known as the whoop. The paroxysm of coughing is accompanied by spasmodic contraction of the glottis, which narrows the **chink,** thus obstructing the free entrance of air, hence the whoop is due to the inrush of air through the narrowed passage of the larynx.

In the uncomplicated case of pertussis no distinctive pathological lesions appear. However, extreme congestion of the different organs, such as the lungs, heart and cerebral meninges, characterizes the paroxysmal attacks. In grave and fatal cases the lesions arise from mechanical accidents, as hemorrhage in the various parts, as the eye, nose, meninges, etc., or emphysema. Intercurrent and complicating diseases occur in many cases, such as pneumonia, broncho-pneumonia and meningitis.

The period of incubation is about ten days. The onset is characterized by symptoms which usually accompany bronchitis or bronchial catarrh. The cough is not distinctive in the early stage, and usually does not develop the characteristic whoop until the disease has existed for two or three weeks, or even longer, when its character becomes manifest. The disease is then readily recognized. It may be described briefly as beginning with a number of short, sharp, spasmodic expiratory coughs, succeeded by a long-drawn inspiration ending in the peculiar whoop which gives the disease its name.

In severe cases the conjunctivae become congested, they protrude, the face is congested and cyanotic, and the mucous membrane is blue in appearance. A tenacious mucus is expelled at the end of a paroxysm, and very often it terminates in emesis. The attacks are preceded by nervous apprehension on the part of the patient, and, coming on at night, the little sufferer usually springs to an upright sitting position in bed, though sound asleep when the paroxysm begins. The number of paroxysms during the twenty-four hours differs in different individuals, ranging from four or five to thirty or forty, depending largely on the temperament of the patient. A paroxysm is often precipitated by nervous excitement or crying, or by mechanical irritation of the air-passages. The duration of the

disease in uncomplicated cases is usually about twelve weeks. The most dangerous complications which may arise are: Meningitis, meningeal hemorrhage, broncho-pneumonia and convulsions due to cerebral congestion, extreme spasm of the glottis and obstinate vomiting, which latter may prove fatal in infants who are already greatly debilitated.

A positive diagnosis cannot be made until the characteristic cough develops, though whooping-cough may be suspected if an epidemic exists in the neighborhood, or if it is known that the patient has been exposed to the disease, and the cough does not yield to the ordinary treatment.

Whooping-cough is usually considered by the laity as insignificant, and therefore little attention is given to its treatment, the child being left to "cough it out," while the fact is, it is a most dangerous disease, the mortuary records showing a high death-rate. Uncomplicated cases readily recover, but the length of time it takes for the disease to run its course, and the many intercurrent diseases which may develop during that time, should induce both parents and physician to guard the patient carefully and meet the complications as they arise, as well as do everything that may be done to mitigate the severity of the symptoms and shorten the duration of the disease.

As to treatment, the only rational method is the same as in all other diseases, which is, to resolve it into elemental conditions and apply our remedies to the relief of these condtiions. In other words, specific treatment is the only logical treatment, and if closely followed will give decidedly the best results. A consideration, therefore, of the following specific remedies, with reference to their specific action upon pathological conditions, will apply: Belladonna, drosera, gelsemium, hysocyamus, lobelia, pulsatilla, passiflora, piscidia erythrina, sanguinaria, solanum car., trifolium pratense, veratrum album, ammonium chloride, cerium oxalate, kali mur. 3x, magnesium phos. 3x. Studying these remedies from the standpoint of their specific action, we find as follows: The administration of belladonna will relieve all those cases showing evidence of capillary congestion, such evidence being a dusky, bloated face, bluish mucous membrane with dull facial expression. Drosera is indicated when the cough is dry, irritable and lacking secretion. Gelsemium will do the work when the patient is restless, nervous, has headache all over the head; when the eyes are bright, the conjunctiva red and suffused and the spasm of the glottis severe. Hyoscyamus is the remedy in all cases showing cerebral hyperemia with nervous excitement, and when the sleep is disturbed by ugly dreams, or partially wakeful delirium

with spasmodic movements. Lobelia will relieve those cases wherein the breathing is short and labored, with a sensation of oppression in the chest, or when pain is complained of in the region of the heart. Pulsatilla will greatly aid those cases wherein the nervous symptoms predominate, the patient showing nervousness and sleeplessness, or where the patient is emotional, peevish, and cries without provocation. Passiflora is to be given when the patient is fretful, sleeps poorly, or is delirious and complains of much pain in the stomach, with vomiting as a pronounced symptom; also weight and pressure in the head, with threatened convulsions. Piscidia erythrina has a beneficial influence upon the disease when the patient shows a distinctly spasmodic cough accompanied by extreme restlessness and insomnia, or if there is a tendency to choreic movement. Sanguinaria is to be given where the bronchial secretion is profuse, and in those cases where the pharynx and larynx are dry, with a sensation of tickling and constriction in the throat. Solanum carolinense will relieve in cases showing a distinct spasmodic element, or when there is exaggerated laryngeal spasm or a tendency to convulsions. Trifolium pratense is beneficial when the larynx is irritable and the cough is increased thereby. Veratrum album should be administered when the surface is bluish in color, the skin cold, the eyes sunken and the features pinched, thus showing vasomotor depression; the cough is spasmodic, suffocating, and the paroxysm ends in emesis. Ammonium chloride is to be used when the secretions are tenacious, ropy and profuse. Cerium oxalate is an excellent remedy in those cases where vomiting is a pronounced symptom. Its exact specific properties are not known to me. Kali mur. 3x is the remedy when the cough is short, spasmodic, hard, harsh and accompanied by wheezing rales, and when the secretion are thick, white and tenacious. Magnesium phos. 3x is the remedy when the spasmodic element predominates. Potassium bromide is curative in like cases, or when the patient shows a tendency to laryngeal spasm or general convulsions, or is nervous, sleeps poorly, is irritable, and when the disease is worse at night.

The above group of remedies studied carefully, with a close observation of the exact conditions present in the many different patients, will insure prompt relief of the severer symptoms, if they do not shorten the duration of the disease. I believe, however, that this may be done in some cases, though not in all. (National Quarterly.)

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H. C. L.

For several years the cost of living has been increasing—or, to state it more accurately, the purchasing value of gold has been decreasing. So long as this increase—or decrease—developed slowly and gradually, no particular harm followed. However, with the advent of the World War gold disappeared from sight and ceased to be a medium of exchange. The various governments issued currency, but its purchasing value fluctuated violently, though always declining. For reasons which we need not discuss at this time, this depreciation has been greatest in Russia and least in America—for which let us be duly thankful. At this writing the purchasing value of a dollar is about one-half of its value in the pre-war period. A condition of finances which should work no hardship upon anyone. All that is necessary is that the proper adjustments in the price of a service or commodity be made to conform to the change in value of our unit of exchange—i.e., the dollar.

We believe that the medical men as a class are charging about the same fees for services rendered as they did five years ago. During the war this course met with the general approbation of the profession, partly because they wanted to be fully as patriotic as any other class, and partly because the most of

them naturally incline to be philanthropic. But the war has been over for a year, and the two dollars for a visit does not buy any more than it did. Moreover, its purchasing value is not likely to increase for quite some time. Under these conditions it seems to the writer that the medical profession has done its full duty by the people, and that it is time that fees should be increased. This is not only our belief, but our practice, and we have found that our patients recognize the justice of our position as soon as it is presented. The more intelligent are already as fully informed as ourselves, and are not even interested in our argument. We are aware that there are many factors which must be considered in this connection, and that some of these may apply to one doctor only. And while it is true that not all of us have found our present necessary expenses to be double those of the pre-war period, yet in each and every instance there has been a substantial increase. In many instances the increase has been not only large enough to wipe out a margin of profit, but to actually establish a deficit, a condition of finances which can be viewed only with grave apprehension unless we expect to be paupers in our old age. We recommend to the reader that he give this matter the thought which it deserves, and then act accordingly.

IN THE STORM'S WAKE

The tropical hurricane which burst over Corpus Christi, Texas, on September 14, creating a tide of ten feet, six inches and accompanied by a tidal-wave which was driven before a seventy-mile gale, caused the death of five hundred persons, left four thousand homeless, and laid waste some twenty million dollars' worth of property.

The town was without drinking water or lights; the railroad on one side of it was washed away, and virtually every dwelling on its beach front was destroyed, together with the boats moored there. Out in the bay were scores of human beings, clinging to spars and wreckage. The Court House had been turned into a morgue.

Governor William P. Hobby, at Austin, received a telegram from Corpus Christi's mayor and another from the American Red Cross at St. Louis. The one asked for two companies of the National Guard, relief supplies and financial aid. The other offered to place the entire facilities of the Southwest Division of the Red Cross at the disposal of the sufferers.

Following this two Red Cross relief trains, originating at Laredo and San Antonio, sped forward with food, clothing, medical stores and working personnel. The trains effected an entrance on the west side of the stricken town, and before wire

communications were re-established with the outer world Red Cross relief had begun. Using a church as headquarters, the workers established three canteens, and within a few hours of their arrival they were feeding 4,000 persons at each meal. Twenty-five cases of clothing were distributed, and in addition to the fund authorized at national headquarters $5,000 was sent by the Red Cross chapter at St. Louis.

Meanwhile many small towns outside Corpus Christi had been completely cut off from the mainland. Boats were the only means of communication, and of these there were virtually none. Galveston was the nearest port to which these thousands of marooned people could look for hope—and from Galveston it came. There the Red Cross officials obtained federal permission to charter a government vessel. Relief supplies were rushed aboard, and she arrived at the flood swept district in time to save what would otherwise have been an additional heavy death toll. A few days later San Antonio came in for its share of the work in caring for the incoming trainloads of refugees, who were met by Red Cross hospitality in the form of hot coffee, food and clothing.

In compliance with requests by city and state authorities the Red Cross officials operating at Corpus Christi closed their work by handing in a survey of the property damage, together with suggestions for rehabilitation. Manager Alfred Fairbanks particularly mentions the Corpus Christi Red Cross chapter as having rendered distinguished service by literally preparing for the disaster before it had reached the community, in consequence of which it was able to distribute aid during the first respite of the storm.

THE EARLY DIAGNOSIS OF PERFORATION OF GASTRIC AND DUODENAL ULCER AND ITS OPERATIVE TREATMENT

By Benjamin T. Tilton, New York

Within the last few years, 14 cases of acute perforation of gastric and duodenal ulcer have come under my observation. The importance of an early diagnosis of this emergency has been impressed upon my mind, and a few points in the recognition of the same have demonstrated their importance. The results of early operation are so much better than those of late interference that we are forced to conclude that the fate of the patient rests chiefly upon the diagnostic acumen of the physician who is first called in. Körte, for example, operated on 10 cases from 1890-1900 with a mortality of 90 per cent. The cases were brought to him soon after the perforation occurred.

oped peritonitis. From 1900-1907 he operated on 17 cases with a mortality of only 23.5 per cent. The great majority of these cases were brought to hi msoon after the perforation occurred. Of the 14 cases that have come under my observation, 8 were operated upon within 12 hours with 5 recoveries, a mortality of 37.5 per cent. The other 6 cases did not come to operation until from 12 to 72 hours after perforation. Of these 2 recovered, a mortality of 66 per cent. Nothing then will improve our statistics for the operative treatment of this the most serious complication of gastric and duodenal ulcer as earlier diagnosis. This diagnosis should be possible in the majority of cases as the symptoms are usually very characteristic. After the development of the resulting peritonitis, the diagnosis may be possible only of general peritonitis, and the exact cause of the same may not be determined before the operation. In fact, as already shown, a diagnosis at this stage is usually of little help to the patient, as the results of late operation are very poor.

The recognition of perforation of a gastric or duodenal ulcer is easier in some cases than in others. This difference is due, in part, to the obscureness or prominence of previous ulcer symptoms and in part to the presence or absence of certain manifestations characteristic of perforation. It is easy, for example, to make a diagnosis of perforation in the case of an ulcer which has been recognized and is under treatment. On the other hand, it may be difficult in a latent or unrecognized one, where there have been perhaps no symptoms to draw the attention to the real site of trouble. In the same way it may be easy to diagnose a case of perforation which has been observed from the beginning and in which all the cardinal symptoms are present. This is not true of cases which come under observation 24 hours after perforation with the initial and typical symptoms obscured by those of peritonitis.

The importance of the history in making the diagnosis must be very strongly emphasized if there is the least probability that the stomach is the organ at fault. The patient and his friends must be carefully questioned as to previous stomach symptoms typical or not of gastric or duodenal ulcer.

Superficial questioning of the patient previous to operation often gives very different results from a careful history taken after the operation, when we have found an old ulcer of the stomach or duodenum that has perforated. Careful questioning now of either the patient or his friends will usually bring out a history of digestive trouble which may or may not be typical of ulcer, and which may have been present years before and almost forgotten.

This vague history may be that of pain in the epigastrium

associated with the ingestion of food, occasional vomiting, and possibly vomiting of blood. In some instances these dyspeptic symptoms may have required treatment, in others not. The patient may have completely recovered from them months or years before the perforation or, he may have had occasional attacks of the same indefinite kind up to the time of the perforation. Perforation of an ulcer that has never given rise to any gastric symptoms is, I believe, extremely rare. It is more common for an ulcer of the duodenum to perforate in an individual in perfect health than for ulcer of the stomach to do so. The former is rare in women.

The history of the onset of the symptoms is often very characteristic and should be obtained in complete detail. There is usually a sudden sharp excruciating pain in the epigastrium. Dieulafoy calls it "le coup de poignard péritonéal." When it comes "out of a clear sky," as it usually does, its onset is very striking. This initial symptom may occur when the patient is at rest or may be preceded by a strain, muscular effort, blow, etc. One of my patients was in the act of hanging up a window curtain when seized with the pain. Another was lifting a heavy weight. It is easy to understand that an impending perforation can be hastened by any factor which produces a contraction of the abdominal muscles. The mere fact that such a slight traumatism precedes these stormy symptoms of perforation suggests the presence of some pathological condition within the abdomen such as an ulcer.

The location of this sudden and severe pain is almost constantly the epigastrium or its vicinity. The site of the perforation may determine the exact location of the pain. If situated at the pylorus, or in the duodenum, the pain is most likely to occur to the right of the median line. In perforations of the cardiac region the pain is felt on the left side. It is the initial location of the pain that is important, as it later becomes generalized with or without a point of greatest intensity. This point is usually the epigastric region in perforation of the stomach, while in duodenal perforation it is often the right liac fossa. For this reason the resemblance to appendicitis may be marked. Associated with the pain there is always more or less collapse. This may be a very pronounced symptom and persist up to the time of death. "The rapid appearance of collapse following sudden excruciating pain in the epigastrium in an individual in perfect health compels the diagnosis of perforation of the stomach or duodenum." (Auffray.)

Examination of the abdomen in a case seen soon after perforation shows it to be usually retracted (scaphoid) and palpation reveals a marked rigidity of the muscles. Particularly the

recti above the umbilicus show the marked contraction, which is board-like in charatcer.

The retraction of the wall seems to be particularly marked in perforation of the stomach. This may be due to the intimate connections of the clatter with the diaphragm which, being maintained in forced expiration by the same reflex action which contracts the muscles of the parietes, draws the stomach upwards. The latter thus rests fixed and immovable between two tense muscles (Roux). This retraction does not last long—it disappears in 24 hours and often before. The muscular rigidity, however, persists.

Tenderness on palpation of the abdomen is usually marked. Like the pain it is at first localized over the site of perforation but some hours later becomes more diffuse. Even now a point of greatest tenderness can usually be made out in the epigastrium. If the point of initial pain and the point of greatest tenderness are located in the epigastrium, it is highly probable that the stomach is the affected part. On the other hand, the stomach must not be eliminated whatever may be the site where the local symptoms are most marked. A careful comparison of the different regions should be made in order to determine the important diagnostic point of the location of the greatest tenderness. In duodenal perforation this point may be in the right iliac fossa resembling acute appendicitis.

Disappearance of the liver dullness is of limited value in the diagnosis of perforation of the stomach or intestine. It is of no importance after 24 hours, as it may be caused then by interposition of a distended intestine between the liver and abdominal wall. Persistence of the liver dullness is perfectly possible with perforation of the stomach. The amount of gas that escapes through the small perforation may be so slight that it does not make its presence evident. Furthermore, the existence of adhesions may make it impossible for an appreciable amount of gas to collect between the liver and the abdominal wall.

It is a striking peculiarity of perforation of an ulcer of the stomach that vomiting during the first 24 hours is a rare symptom. If it does occur it is most likely to take place at the outset and then stop. Brunner found initial vomiting in a third of the cases, Stadwell in 70 per cent., Finney in 40 per cent., and Fenwick in 29 per cent. The vomiting that occurs after 24 hours is due to peritonitis. Traube thinks that the absence of vomiting in perforation of the stomach is due to the fact that the patient vomits, so to speak, into his peritoneal cavity instead. It is difficult to estimate the diagnostic value of this absence of vomiting, but it certainly should be noted and taken into consideration, particularly if other symptoms point toward

the stomach as the site of the perforative lesion. The persistence of vomiting is, of course, not incompatible with the diagnosis of perforation of the stomach.

The presence in most acute cases of a "free interval" is of diagnostic importance. There is during this period an improvement in or cessation of all symptoms. The patient has recovered from the shock, his pain is slight, there is no vomiting, the pulse is slow and of good volume, the expression is good, and there seems to the inexperienced a marked change for the better. This condition of affairs is most deceptive, and it is easy to be led into the error of postponing operative intervention. There is great danger in this, however, as this usually represents the most favorable time for operation, and delay means the gradual progression of a peritonitis. There is one symptom that can be relied upon even now to make the diagnosis, viz., the muscular rigidity in the abdominal wall. This is invariably present and should be given great weight. It is at this time too that the history of the sudden stormy onset and the location of the pain should be given due consideration.

There are a number of condtiions which can cause symptoms like those of perforated gastric ulcer. Only by careful weighing of each sign can the error be avoided. Sudden severe epigastric pain is a necessary accompaniment of perforation, but not sufficient to make the diagnosis. With the pain go collapse, extreme muscular rigidity and tenderness over the stomach; later, the signs of developing peritonitis. Intense epigastric pain can be caused by gall-stones, acute gastritis, etc. I recall a case which gave a history of sudden tearing pain in the epigastrium following an attack of vomiting. The patient, a man of 50, was brought to the hospital 24 hours later with a temperature of 101.6 deg. F., pulse 120 and leucocyte count of 22,000 with 85 per cent. polynuclears. There was marked tenderness and some rigidity in the epigastrium but none over the rest of the abdomen. The clinical picture resembled that of perforated gastric ulcer with the exception that the typical board-like rigidity of the abdominal muscles was wanting. The subsequent course of the case showed it to be one of acute alcoholic gastritis. The diaphragmatic pleurisy associated with a beginning pneumonia may cause sudden severe pain in the epigastrium which with the fever and initial vomiting may lead one to diagnosis of perforated ulcer. The tenderness, however, is not so marked, the muscular rigidity not of a board-like character, the face is flushed and there are usually signs pointing to the lungs. An acute appendicitis may begin with epigastric tenderness. In place of a retracted abdomen, intense and changes later to the right iliac fossa. Here too the muscular rigidity in the epigastric region has not the same

board-like character as in perforated ulcer. Acute pancreatitis bears probably the greatest resemblance to this condition. There is the same sudden onset of pain with collapse combined with epigastric tenderness. In place of a retaracted abdomen, however, as in ulcer, there is usually a fullness in the epigastrium. Symptoms like those of intestinal obstruction soon become prominent. The abdomen is not so board-like as in perforation.

The treatment of perforated gastric ulcer should be prompt. The earlier the patient is brought to the operating table the better the outlook. It is seldom necessary to wait for recovery from the initial shock. This is usually over by the time that the preparations for the operation are completed. To wait for complete reaction would involve more risk than that from increased shock due to the operation. After the diagnosis has been made ,a hypodermic injection of morphine is a good preparation for the general anesthesia. Precautions should be taken in susceptible subjects particularly the old and alcoholic to prevent pneumonia. The mouth and teeth should be thoroughly cleansed. The ether should be given cautiously and any regurgitation prevented.

The operative procedures should be short and simple. All the manipulations can be done satisfactorily through an incision 3 to 4 inches long in the median line above the umbilicus. There need be no handling of the intestines nor evisceration. The perforation is found in the great majority of cases on the anterior wall of the stomach near the pylorus and is easily exposed by raising the liver and drawing the stomach forward into the wound. The presence of lymph flakes is a good guide to the seat of the trouble. The opening is usually small, sharply defined, punched out in appearance and there is more or less induration of the edges. A satisfactory closure can usually be made with silk sutures in the form of a purse string or one or more rows of Lembert's. In this way the edges are turned in. It is usually not necessary to excise the indurated margins nor does it seem advisable when simple suture is so effectual. Covering the line of suture with a portion of omentum is an excellent expedient for preventing extravasation in case the sutures give way. It has even been used successfully as a substitute for suture, where the latter was impracticable.

The addition of a gastro-enterostomy as advocated by some surgeons is not necessary in the great majority of cases and prolongs undesirably the operation. When, however, there are distinct signs of pyloric obstruction present, or the latter is to be feared on account of the infolding and suturing

of the edges of the ulcer, a gastro-enterostomy is indicated. Without some indications it is undesirable to prolong the operation by any such time-consuming procedure. In one of my cases there was an associated carcinoma of the pyrolus with dilatation of the stomach and secondary nodules in the liver, and a posterior gastro-enteroostomy was therefore done.

The perforation having been closed, it is desirable to cleanse the peritoneal cavity of exudate and possible stomach contents. When the exudate is confined to the upper part of the abdomen as in the cases operated upon early, it can be removed by sponging. The upper and lower surfaces of the liver and the right kidney pouch should be cleansed with special care. When the exudate is general and fills the pelvis, flushing of the abdominal cavity with large amounts of saline solution is advisable. This can be done very satisfactorily with a Blake's tube which is introduced into different parts of the cavity until the solution returns clear. Indiscriminate irrigation of the abdominal cavity is probably harmful in some cases as the infectious material is disseminated. The intra-abdominal manipulations should not be unnecessarily prolonged.

Drainage is largely a matter of individual preference. Many surgeons, Körte for instance, do not employ any drainage. Others drain not only the site of the perforation but also the pelvis by means of a separate incision above the pubes. A middle course seems to me the most desirable. A small cigarette-drain passed down to the line of suture in the stomach provides a satisfactory escape for any infectious material left in the neighborhood and, in case the suture gives way, furnishes an outlet for escaping stomach contents. Such a drain does no harm and may be of great service. Separate drainage of the pelvis is not necessary in the majority of cases. The exudate which has gravitated there has, in case saline irrigation is employed, been sufficiently diluted to be innocuous.

In the after treatment it is desirable to withhold nourishment by mouth for four or five days. Rectal feeding combined with high irrigation of normal salt solution is indicated. If the patient is much reduced it may be necessary to resort to fluids by mouth soon after the operation. Pneumonia and parotitis should be guarded against, particularly in the alcoholic, by careful cleansing of the mouth and teeth. A half-sitting posture should be assumed at an early period so as to prevent hypostatic pneumonia.

The operative results are encouraging although the mortality is still high if we take all cases together. Many cases are still brought to the hospital with a fully developed peri-

tonitis. Others are very unfavorable subjects, particularly the alcoholic.

The statistics will therefore vary according to the class of patients dealt with. Among the higher classes the mortality will naturally be much lower than among the poorer patients who do not receive such prompt medical attention and who are, in the cases of the males, so frequently alcoholic. The series that I have collected from the hospital records belong in the latter class and the mortality is hence fairly high, viz., 50 per cent. Moynihan reports 12 cases also with a mortality of 50 per cent. Caird operated on 25 cases with a mortality of 36 per cent. Körtee series of 17 cases showed 23.5 per cent. mortality, the lowest that I have been able to find.

The 14 cases described were operated on with one exception, in one hospital from 1904 to 1907, and are the only ones that have come under my observation. If we include among the successful cases the one in which a fatal pneumonia occurred six weeks after the operation and two weeks after the patient had begun to walk about the ward, the mortality of the series is 42.8 per cent. (Archives of Diagnosis.)

DOVER, OF DOVER'S POWDER

The picturesque type of medical man has passed away; he is a creature of the past. If we wish to resurrect him in our mind's fancy we can do no better than to read the life of Thomas Dover—he of Pulvis Ipecacuanhae compositus fame. If we can credit Smollett, the practitioners of Dover's day were, many of them, extraordinarily adept advertisers and grafters, though always in more or less ethical guise. Dover almost deserves relative respect, in that he actually became an avowed buccaneer, roaming the high seas in the most piratical fashion. Many of his confreres ashore were buccaneers as truly as he, pirates who cruised London town with the black flags of professional piracy stowed in the medical locker and flying hypocritically in their stead the stolen pennants of the little ethical brotherhood, they who guided themselves by the principles of Sydenham the revered.

Well, Dover's ship, the "Duke and Duchess," reached England in 1711 with £170,000 prize-money and with Alexander Selkirk ("Robinson Crusoe") as mate, Dover having taken the famous castaway off Juan Fernandez on the 2nd of February, 1710. The captain's details of rescue read as romantically as Defoe's story itself.

Dover led the van in an assault on the two cities of Guaiaquil, and then sacked them.

Certainly a picturesque, romantic career. After he relinquished buccaneering he established himself in London as a practitioner. There he wrote "The Ancient Physician's Legacy—for revenue purposes" only, for the spirit of the buccaneer was not dead in the old man, as "no occasion is missed either to blow his own trumpet, or to tilt a lance at his colleagues."—Critic and Guide, June, '10.

INDICANURIA

By A. L. Benedict, Buffalo

The writer has no intention of entering into a thorough discussion of this topic but wishes merely to present some observations and questions of a practical nature, without implying a claim of originality.

1. Indican is rarely found in the urine of infants and young children, except in cases of marked intestinal putrefaction. Traces or even distinct but slight reactions are, however, pretty constantly found in the urine of adults without any significant departure from the normal.

2. Marked indican reaction denotes a serious, sometimes even a fatal condition.

3. Indican in the urine and indol in the feces theoretically contincide, but not necessarily so practically. This is largely because the test for the former is more delicate, partly because the indol actually present in a fecal mass may not coincide in period of absorption to the contemporaneous urine.

4. Acid, fermenting, gassy, yeast-containing feces obviously do not correspond to the conditions for indol formation and hence to urinary indican. Even the differences in odor of feces may be relied on to some degree as a probable index of urinary indican or its absence. Lactic acid bacilli, buttermilk, etc., have a better therapeutic value if used in cases of putrefaction with indol formation and indican excretion than if given when there is already too much carbohydrate fermentation. This statement is a ridiculous truism but warranted by frequent mistakes in treatment due to failure to discriminate.

5. Indican may be found both in diarrhea and constipation, in hyperchlorhydria and hypochlorhydria, and may be absent in both.

6. Some authors have pointed out the coincidence of indicanuria with excessive urinary acidity. But the connection is not absolute.

7. The so-called indican reaction may appear as blue, up

to a very dark navy-blue in extreme cases, or as red, or as a mixture of the two forming various shades of purple. While there seems to be no dispute tha tthe blue color really means indican, there is considerable difference of opinion as to whether a red color is merely due to a difference of oxidation, into indigo-red instead of indigo-blue; or whether the red is due to the skatol derivative instead of the indol derivative—the clinical interpretation being the same, namely intestinal putrefaction; or whether the red is due to an entirely different pigment or pigments, otherwise known as uro-rosein, uro-erythrin, etc. As to these hypotheses, the writer would make the observation that it is not merely a matter of chance whether a red or blue color is developed. The same sample of urine and usually urine from the same case at different times for a single period of the same condition, gives the same characteristic color in repeated tests, varying the quantity and kind of oxidizing agents used. In other words, if one color is due to indigo-blue and the other to indigo-red, there is some definite factor which controls its oxidation in the same way. The frequent appearance of purple or even of fairly distinct bands of red and blue in the same test tube, apparently indicates that the color is due to something entirely different from the blue. On the other hand, the general clinical significance seems to be the same—intestinal putrefaction. However, urines giving a clear red or pink, without signs of marked petrefaction, are also encountered. Such urines usually are quite highly acid and accompanied with precipitates of urates or uric acid. We need clearer chemic information on these points. It is especially important for practical, clinical purposes, to know whether or not all blue tests are due to indican (which, from a general clinical consideration, seems probable), and whether all red tests are due to a variant of indican or to a pigment of different nature but similar significance or whether (as seems probable from clinical evidence) there are red chromatogens of entirely different nature and significance. If this last hypothesis is correct, it is of the utmost importance to have discriminating tests.

8. In the writer's personal experience, headaches are almost always marked by indicanuria; in his experience with patients, they are usually so, unless accounted for by uncorrected refractive errors, nervous conditions, pelvic reflexes, etc.

9. The writer confesses, with reluctance, to the highly unscientific and unfashionable belief that certain so-called internal antiseptics really are so, causing relief of headache, local intestinal symptoms, gas formation, and causing the disappearance of indol from the feces and indican from the urine.

This confession, however, should not be construed as a faith in every so-called internal antiseptic advertised, nor as a disbelief in evacuative measures of various kinds, nor as a belief that the bacteria themselves are killed so as to produce a condition of sterility.

10. From a sonsiderable series of observations, it would appear that blue indican reactions correspond to a meat diet, red to a vegetable diet, purple to a mixed diet, with putrefaction of both animal and vegetable proteids. This observation is sub judice and is stated here in order to elicit observations and criticisms by others.—(Archives of Diagnosis.)

SOCIETY CALENDAR

National Eclectic Medical Association meets in Chicago June 17, 1919. Finley Ellingwood, M. D., Chicago, President; Dr. H. H. Helbing, St. Louis, Mo., Secretary.

Eclectic Medical Society of the State of California meets May, 26, 27, 28, 1920, in Fresno, Cal. Ira Wheeler, M.D., Fresno, Cal., President; H. T. Cook, M.D., Los Angeles, Secretary.

Los Angeles Eclectic Medical Society meets at 8 p. m. on the first Tuesday of each month. J. A. Munk, M.D., Los Angeles, Cal., President; C. Ohnemuller, M.D., Los Angeles, Secretary.

Southern California Eclectic Medical Association meets in May, 1919. Dr. Clinton Roath, Los Angeles, President; Dr. H. C. Smith, Glendale, Secretary.

NEWS ITEMS

Dr. Catherine Ohnemuller, Los Angeles, has returned from a three weeks' vacation spent in Northern California.

Dr. J. A. Munk, Los Angeles, has disposed of his Cadillac automobile and purchased a Velie.

Dr. H. V. Crook, Big Pine, was in the city last month on professional business.

Dr. and Mrs. Oran Newton of Taft are the proud parents of a son, born early in November. This is their second child.

Dr. S. G. Nordstrum, Sioux Rapids, Iowa, has moved to California and expects to open an office in Hollywood in the very near future.

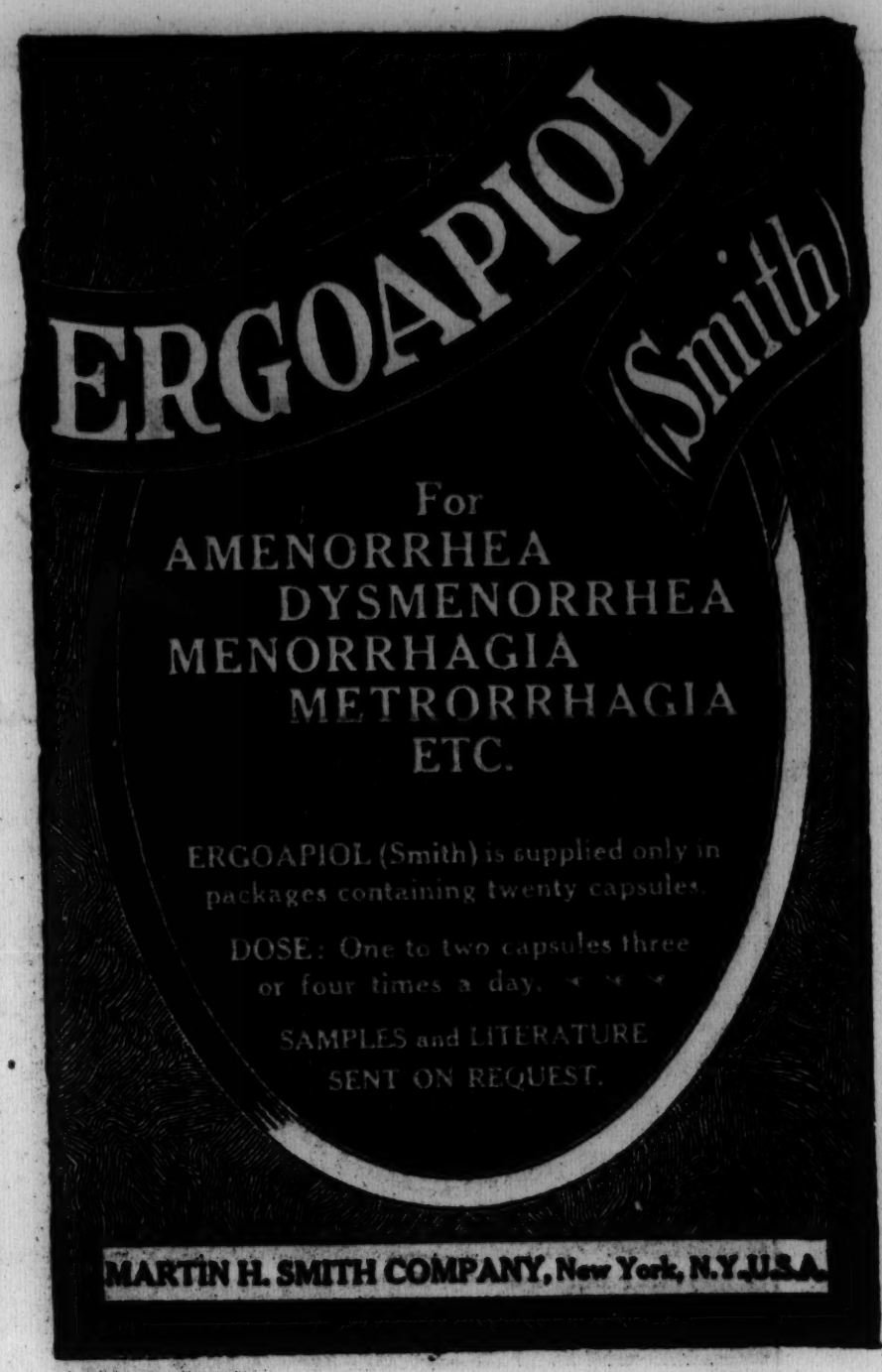
Dr. S. H. Savage, Lancaster, was the first doctor to arrive upon the scene of the recent railroad wreck near Acton and did a wonderful work among the sufferers before the relief train arrived from Los Angeles.

CLUB RATES

The various Eclectic publishers have decided to renew their special club offers to December 1, 1918, on a straight 10 per cent reduction, where two or more journals are ordered at one time. If you are not familiar with any of these journals, samples may be obtained on request.

	Price.	Club Rate.
California Eclectic Medical Journal, 819 Security Bldg., Los Angeles	1.00	.90
Eclectic Medical Journal, 630 W. 6th St., Cincinnati, Ohio	2.00	1.80
Ellingwood's Therapeutist, 32 N. State St., Chicago, Ill	1.50	1.35
National E. M. A. Quarterly, 630 W. 6th St., Cincinnati, Ohio	1.00	.90

You may subscribe to any or all of the above journals through this office, the only condition being that subscriptions are paid in advance and 10 per cent discount allowed on an order for two or more, including this Journal.



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